

W claim:

1. A microwave waveguide comprising:
broad walls separated by and electromagnetically coupled with at least one field modifier wherein said modifier has a nonlinear profile.
2. The microwave waveguide according to claim 1, wherein said field modifier is adjustable.
3. The microwave waveguide according to claim 1, wherein said waveguide includes at least two field modifiers having nonlinear profiles.
4. The microwave waveguide according to claim 2, wherein said field modifier is adjusted through the use of mechanical actuators.
5. The microwave waveguide according to claim 2, wherein said modifier is adjusted in response to a sensed condition in a web to be dried.
6. The microwave waveguide according to claim 1, wherein said field modifier is physically coupled to said broad walls.
7. The microwave waveguide according to claim 1, wherein said field modifier is capacitively coupled to said broad walls.
8. The microwave waveguide according to claim 1, wherein the field modifier is configured to provide uniform heating or drying along the length of the waveguide.
9. The microwave waveguide according to claim 1, wherein said field modifier is configured to provide a relative slot height profile as defined by
$$h(z) = (b/\pi)\sin^{-1}[(1/\sin^2(\pi h_0/b) - 2\omega Z\epsilon_0\epsilon''_r tz/b)^{-1/2}]$$
10. A method of web heating or drying comprising:

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subjecting a paper web to a microwave field, wherein said heater or dryer includes at least one field modifier that is curvilinear.

11. The method according to claim 9, wherein said field modifier is adjustable.

12. The method according to claim 9, wherein at least two field modifiers have nonlinear profiles.

13. The method according to claim 10, wherein said field modifier is adjusted through the use of mechanical actuators.

14. The method according to claim 10, wherein said field modifier is adjusted in response to a sensed condition in a web to be dried.

15. The method according to claim 10, wherein the field modifier is configured to provide uniform heating or drying along the length of the waveguide.

16. The method according to claim 10, wherein said field modifier is configured to provide a relative slot height profile as defined by

$$h(z) = (b/\pi)\sin^{-1}[(1/\sin^2(\pi h_0/b) - 2\omega Z\epsilon_0\epsilon''_r tz/b)^{-1/2}].$$

17. A microwave waveguide comprising:

broad walls separated by and electromagnetically coupled with at least one narrow wall wherein said narrow wall has a nonlinear profile.

18. The microwave waveguide according to claim 17, wherein said narrow wall is adjustable.

19. The microwave waveguide according to claim 17, wherein said waveguide includes at least two narrow walls having nonlinear profiles.

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